

Remarks

Claims 1, 3, 4, 7, 13, 15-21, 25-35, 38-40, 45-46 and 51-52 are pending.

Claim Objection

Claim 13 has been amended as suggested by the Examiner.

Establishing an Absolute Reference for Radial Positioning; Controlling Rotational Speed (Claims 13, 39 and 51)

Claim 51 was rejected under Section 103 as being obvious over Honda 2002/20191517 in view of Black 3426337. With regard to Claim 51, the Examiner states only that: "All elements positively recited have already been identified with respect to earlier claims. No further elaboration is necessary." Office Action page 8. So far as Applicants can tell, however, the Examiner's remarks for the earlier claims do not identify establishing a reference, as recited in Claim 51. And, in fact, the combination of Honda and Black does not teach establishing a reference as recited in Claim 51. Nevertheless, Claim 51 has been amended to further distinguish Honda and Black, as detailed below.

Claim 51 has been amended to recite establishing an absolute radial location as a reference for radial positioning on the non-data side of the disk. Support for the amendment may be found in U.S. patent application serial no. 10/347,074, which is incorporated by reference into the present application at paragraph 0015 of the Specification. See, for example, page 4, lines 5-9 and page 9, lines 1-3 in application serial no. 10/347,074. Amended Claim 51 recites sensing a reference pattern and, based on the sensing, (1) establishing an absolute radial location as a reference for radial positioning and (2) controlling a rotational speed of the disk.

Amended Claim 51 distinguishes over Honda and Black in two respects. First, Honda and Black do not teach or suggest establishing an absolute radial location on the disk (specifically not on the non-data side of the disk). Second, Honda and Black do not teach or suggest performing the following two acts based on the act of sensing a reference pattern -- (1) establishing a reference for radial positioning and (2) controlling rotational speed.

So far as might be deemed relevant to the claimed subject matter, Honda stands for the unremarkable proposition that some type of radial position and rotational speed control is used for disk labeling. Black teaches using a reference

pattern to determine and control the position of a read/write transducer. In Black, signal pulses derived from the "radial boundary transition" on the reference pattern and pulses derived from the "spiral boundary transition" on the reference pattern are used to determine and control the position of the transducer. See, for example, Black column 2, line 71 through column 3, line 3. Claim 51 has been amended to make it clear that sensing the reference pattern is used to establish an absolute reference for radial positioning, not simply to establish a position indicator as in Black. Claim 51, as amended, recites establishing "an absolute radial position" as a reference, based on sensing the reference pattern. An absolute reference is a point or location that does not change. Black does not teach or even suggest the absolute reference of amended Claim 51.

Black also does not teach both that act of establishing an absolute reference for radial positioning and the act of controlling rotational speed based on the act of sensing his reference pattern. (The Examiner has made no specific assertion to the contrary.) If the Examiner disagrees, he is respectfully requested to specifically point out and explain those passages in Black that teach using the reference pattern to both establish an absolute radial position as a reference for radial positioning and controlling rotational speed. Absent such a showing, the rejection of Claim 51 should be withdrawn for this additional reason.

The same analysis applies to Claims 13 and 39, as amended. Claim 13 has been amended to recite a controller configured to, with a sensed frequency of electromagnetic radiation radiated from the reflective regions of the pattern, control a rotational speed of the disk and establish an absolute reference for a radial positioning on the untracked non-data side of the disk. Similarly, Claim 39 has been amended to recite controlling, with the sensed frequency, a rotational speed of the disk and establishing, with the sensed frequency, an absolute reference for radial positioning on the untracked non-data side of the disk.

Claims 13, 39 and 51 and their respective dependent claims, therefore, are felt to distinguish patentably over the cited references.

Sensing a With a Stationary Detector (Claims 1 and 26)

Claims 1 and 26 were also rejected under Section 103 as being obvious over Honda in view of Black. Claim 1 recites sensing a frequency from the pattern with a

stationary detector. Claim 26 recites a means for sensing electromagnetic radiation from a pattern with a stationary sensor.

Black's detector/sensor is not stationary. In Black, the "reference pattern 30 is sensed by an optical sensing system" that includes a light source 40, a lens system 43, a mirror 46, a front mirror 47, and a light-sensitive transducer 50. Black column 4, lines 53-64. Front mirror 47 is "mounted within the transducer assembly 12." Black column 4, lines 63-64. Transducer 12 carrying front mirror 47 moves radially along the disk during sensing operations. Black column 5, lines 5-10.

Claims 1 and 26 and their respective dependent claims, therefore, distinguish patentably over the combination of Honda and Black.

[Applicants have interpreted "detector" and "sensor" in Claims 1 and 26, respectively, as encompassing all elements needed to perform the detecting/sensing function (as opposed to only the light sensing element -- the light-sensitive transducer 50 in Black, for example). This interpretation of the claims seems reasonable, particularly when comparing the claimed detector/sensor with the "optical sensing system" of Black. However, if the Examiner disagrees with this interpretation, then Applicants are willing to amend Claims 1 and 26 to make it more clear that the claimed detector/sensor includes all of the elements needed to perform the detecting/sensing function.]

Respectfully submitted,

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